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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/024,846	12/18/2001	Toshiaki Yoshihara	1100.66059	1826

7590

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EXAMINER

LEE, PATRICK J

ART UNIT

PAPER NUMBER

2878

DATE MAILED: 08/18/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/024,846

Applicant(s)

YOSHIHARA ET AL.

Examiner

Patrick J. Lee

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 16 June 2003.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 December 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

**DETAILED ACTION**

***Specification***

1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 1, 4-6, 8-9, 11-12, 14-15, 17-18, & 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ferguson 5,717,422 in view of Nonomura et al 6,115,021.

With respect to claims 1, 18, & 20, Ferguson discloses a display device comprising a light source (2), a liquid crystal display (3), and a computer control unit (5).

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Liquid crystal display (3) serves as a light-switching element that controls the light emitted from source (2) (see column 3, lines 57-65). Computer control unit (5) serves as both a light emission switching unit to control the switching performed by the liquid crystal display (3) and a control unit to control the synchronization of the light-emission timing and switching. However, Ferguson does not disclose the use of a frame number changing unit. Such is known and disclosed by Nonomura et al. Nonomura et al disclose an apparatus for driving a liquid crystal panel comprising a FLC panel (1) as a light switching element and a control unit, a data electrode driving circuit (22) as a light emission switching unit, and a temperature compensation circuit (35, 44). Temperature compensation circuit (35, 44) serves as a frame number changing unit to change the frame frequency related to the operation temperature of the FLC panel (see Abstract, lines 13-24). To modify the teachings of Ferguson by those of Nonomura et al would have been obvious because it would allow for the device to avoid problems with flicker, which would adversely affect image quality (see column 6, lines 25-33).

With respect to claim 4, Nonomura et al disclose the use of a thermistor (28) as a temperature detector and a temperature compensation circuit (35, 44) as a changing circuit for changing the frame number based on the temperature detected.

With respect to claim 5, Nonomura et al disclose the LAT time (the inverse of frequency) to decrease as temperature increases. It is inherent then as the temperature increases, the frequency would then increase.

With respect to claims 6 & 8, FLC panel (1) is a liquid crystal display element.

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With respect to claims 9 & 11, the use of a liquid crystal material with spontaneous polarization is not disclosed, but such is known in the art and would have been obvious in order to produce a clear display.

With respect to claims 12, 14-15, & 17, the FLC panel (1) taught by Nonomura et al constitutes an active element.

5. Claims 2-3, 7, 10, 13, 16, & 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ferguson 5,717,422 in view of Nonomura et al 6,115,021, and in further view of Okumura et al 5,844,534.

With respect to claims 2 & 19, the combination of teachings of Ferguson and those of Nonomura et al disclose the device as described in the discussion of claim 1. However, the teachings do not disclose a discrimination unit for sensing motion pictures in order to adjust the frame. Such is known and disclosed by Okumura et al. Okumura et al disclose a liquid crystal display comprising a panel (32), a moving/standstill picture detection circuit (52, 85), a frequency converting circuit (87), and a multi-field driving control unit (56). To modify the teachings would have been obvious, as it would allow for the reduction of flicker.

With respect to claim 3, increasing the frame number for motion picture data is known and would have been obvious in order to improve the performance of the device in making the transitions smoother and reducing any flicker.

With respect to claim 7, FLC panel (1) is a liquid crystal display element.

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With respect to claim 10, the use of a liquid crystal material with spontaneous polarization is not disclosed, but such is known in the art and would have been obvious in order to produce a clear display.

With respect to claims 13 & 16, the FLC panel (1) taught by Nonomura et al and panel (81, 32) by Okumura et al constitutes an active element.

### ***Response to Arguments***

6. Applicant's arguments with respect to claims 1-20 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Shiraki et al 5,844,538 disclose an active matrix-type image display apparatus.

Yasunishi 6,094,243 disclose a liquid crystal display device.

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

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extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Patrick J. Lee whose telephone number is (703) 305-3871. The examiner can normally be reached on Monday through Friday, 8:00 am to 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David P. Porta can be reached on (703) 308-4852. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 746-9558 for regular communications and (703) 306-5511 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1782.

Patrick J. Lee  
Examiner  
Art Unit 2878

PJL

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August 6, 2003

  
**DAVID PORTA**  
**SUPERVISORY PATENT EXAMINER**  
**TECHNOLOGY CENTER 2800**